

Application No. 09/785,559
Filed: February 16, 2001
TC Art Unit: 1744
Confirmation No.: 3534

REMARKS

Claims 1-15, 17-26 and 30-58 are pending in the present application. Claims 3 and 21 are cancelled herein, without prejudice. Claims 1, 2, 4, 5, 7-11, 14, 22, 54-56 and 58 are amended herein. New claims 59 and 60 are added herein. Accordingly, claims 1, 2, 4-15, 17-20, 22-26 and 30-60 will be pending upon entry of the instant amendments.

Support for the amended claims can be found throughout the specification and encompassed by the scope of the claims as originally filed. In particular, support for the amendment to claims 1, 54, 55, 56 and 58 can be found, at least, for example, from original claims 3 and 21. Amendments for the remaining claims were made to correct antecedent properties and dependencies. Support for the new claims 59 and 60 can be found, at least, for example, from the present claims 39 and 45 in which the Examiner indicated as having allowable subject matter if rewritten in independent form including all of the intervening claims. No new matter has been added.

Any amendments to the claims should in no way be construed as acquiescence to any of the Examiner's rejections and were done solely to expedite the prosecution of the application. Applicant reserves the right to pursue the claims as originally filed in this or a separate application(s).

Claim Objection

Claims 21, 22, 23 and 25 are objected to for failing to further limit the subject matter of a previous claim. Claim 21 was cancelled and the dependency of others of the objected to claims amended herein thereby rendering this objection with

Application No. 09/785,559

Filed: February 16, 2001

TC Art Unit: 1744

Confirmation No.: 3534

respect to this claim and its respective dependent claims 22, 23 and 25 moot.

Claim Rejections - 35 U.S.C. §102

Claims 1, 2, 7, 10, 11, 31, 37, 38, 40, 55 and 58 are rejected under 35 U.S.C. §102(b) as being anticipated by Lee et al. (U.S. Patent 4,128,456).

Applicants respectfully traverse the foregoing rejection.

In the presently amended claims, the apparatus for conducting electrophysiological measurements on cells comprises a measuring head provided with at least one measuring electrode for impaling the cells, with at least one reference electrode, at least one perfusion conduit made as a perfusion inlet having a first end opening, where the measuring electrode and the reference electrode are molded into a common support, where at least one perfusion inlet being arranged essentially parallel with the measuring electrode, and the first end opening being located above a lower end of the measuring electrode.

Lee et al. fails to anticipate each and every element of the claimed invention. Lee et al. discloses an apparatus for conducting electrophysiological measurements having a first electrode (reference number 28) which is fixed in the "perfusion tube assembly" (reference number 29). Lee et al.'s apparatus also comprises a second electrode (reference numbers 14, 16, 18) which, in contrast to the first electrode, is integrated in the "perfusion chamber" (reference number 8). This second electrode in Lee et al.'s apparatus is provided in order to apply a stimulation current onto the "life support fluid" (reference number 55). Contrary to the Examiner's assertion that the cited

-14-

WEINGARTEN, SCHURGIN,
CAGNERIN & LEBOVICI LLP
TEL. (617) 542-2290
FAX (617) 451-0113

Application No. 09/785,559

Filed: February 16, 2001

TC Art Unit: 1744

Confirmation No.: 3534

reference anticipates the claimed support according to the invention, Lee et al. is absolutely silent with respect to the combined elements of a measuring electrode in conjunction with a reference electrode. Additionally, Lee et al. fails to anticipate, or for that matter suggest, a molding of the reference electrode together with the measuring electrode into a perfusion tube assembly. Therefore, Lee et al. cannot anticipate the claimed invention. Applicants respectfully request reconsideration and withdrawal of the foregoing rejection.

Claim Rejections - 35 U.S.C. §103

Claims 3, 32 and 41 are rejected under 35 U.S.C. §103(a) as being obvious over Lee et al. (U.S. Patent 4,128,456).

Applicants respectfully traverse the foregoing rejection.

As argued above, Lee et al. fails to anticipate the claimed invention. Lee et al. also fails to teach or suggest the claimed combination. No teaching or suggestion can be gleaned from Lee et al. alone for molding a reference electrode with a measuring electrode into a perfusion tube assembly. Furthermore, no requisite motivation can be inferred nor indicated by the Examiner to come up with the presently claimed invention.

Claims 4-6, 8, 9, 12-14, 17-26, 30, 33-36, 42, 43, 46, 49, 52, 54 and 56 are rejected under 35 U.S.C. §103(a) as being obvious over Lee et al. in view of Olesen et al. (WO 98/50791).

Applicants respectfully traverse the foregoing rejection.

Olesen et al. fails to cure the deficiencies found in Lee et al., which was argued above. A molding of at least one reference electrode together with at least one measuring electrode into the

Application No. 09/785,559
Filed: February 16, 2001
TC Art Unit: 1744
Confirmation No.: 3534

perfusion tube assembly is neither made obvious by Olesen et al. nor possible at all with the known apparatus, since in that case the second electrode can no longer be used for applying a stimulation signal onto the life support fluid and, therefore, the known apparatus will be inoperable. If combined, the prior art references would produce an inoperative combination. In fact, Olesen et al. teaches away from having two electrodes in the "microperfusion chamber" due to its extremely small size (page 29, lines 17-19). Applicants consider that Lee et al., either alone or in combination with Olesen et al., cannot make the present claimed combination obvious.

The remaining rejections are as follows: claims 15 and 53 are rejected under 35 U.S.C. §103(a) as being obvious over Lee et al. in view of Olesen et al. and Takeshita et al. (U.S. Patent 6,377,559); claim 44 is rejected under 35 U.S.C. §103(a) as being unpatentable over Lee et al. in view of Olesen et al. and Byrne et al. (WO 00/34776); claims 47 and 48 are rejected under 35 U.S.C. §103(a) as being obvious over Lee et al. in view of Olesen et al. and Farb et al. (U.S. Patent 6,068,722); and claims 50 and 51 are rejected under 35 U.S.C. §103(a) as being obvious over Lee et al. in view of Olesen et al. and Carr et al. (U.S. Patent 5,888,825).

Applicants respectfully traverse the foregoing rejections.

As reiterated, arguments against obviousness are discussed above with respect to Lee et al. and Olesen et al. Additionally, the other cited references fail to cure the deficiencies found in the primary reference Lee et al. since none of the cited references, either alone or in combination, teach or suggest the claimed combination of having both at least one measuring

Application No. 09/785,559
Filed: February 16, 2001
TC Art Unit: 1744
Confirmation No.: 3534

electrode and at least one reference electrode molded into a perfusion tube support assembly.

CONCLUSION

Based on the foregoing, entry of the amendments and remarks presented herein, reconsideration and withdrawal of all the rejections and allowance of application with all pending claims are respectfully requested.

The Examiner is encouraged to telephone the undersigned attorney to discuss any matter that would expedite allowance of the present application.

Respectfully submitted,

KARL-HEINZ BOVEN ET AL.

By: 

Charles L. Gagnebin III
Registration No. 25,467
Attorney for Applicant(s)

WEINGARTEN, SCHURGIN,
GAGNEBIN & LEOVICI LLP
Ten Post Office Square
Boston, MA 02109
Telephone: (617) 542-2290
Telecopier: (617) 451-0313

CSK/knr
299568-1

-17-

WEINGARTEN, SCHURGIN,
GAGNEBIN & LEOVICI LLP
TEL. (617) 542-2290